Ku Chish (formerly North Chiricahua) Potential Wilderness Area Evaluation [PW-05-03-D1-003]

Area Overview

Size and Location: The Ku Chish Potential Wilderness Area encompasses 26,266 acres. This area is located in the Chiricahua Mountains, which is part of the Douglas Ranger District of the Coronado National Forest in southeastern Arizona (see Map 2 at the end of this document). The Ku Chish PWA is overlapped by 22,447 acres of the Chiricahua Inventoried Roadless Area, comprising 85 percent of the PWA.

Vicinity, Surroundings and Access: The Ku Chish Potential Wilderness Area is approximately 100 miles southeast of Tucson, Arizona, within the Douglas Ranger District in the Cochise Head area at the northern end of the Chiricahua Mountains.

There is one small incorporated community (Willcox) and several unincorporated communities (Dos Cabezas, Bowie, San Simon and Portal) near the northern end of the Chiricahua Mountains and the PWA. Interstate 10 connects the Tucson metropolitan area to Willcox, Bowie and San Simon. In addition, the Chiricahua National Monument and Fort Bowie National Historic Site are also located nearby.

The primary motorized access route into and through the National Forest at the north end of the Chiricahua Mountains is Pinery Canyon Road (NFS Road 42). Pinery Canyon Road is a Cochise County-maintained road, except for the portion within the proclaimed Forest boundary. It is accessed from State Route 181 at the entrance to Chiricahua National Monument on the east side of the Chiricahua Mountains and from Portal, Arizona on the west side.

From the south, North Fork Road (NFS Road 356) accesses the PWA; it provides motorized access that requires a high–clearance, four-wheel-drive vehicle to Indian Creek Trail (NFS Trail 253). Indian Creek Trail provides nonmotorized trail access into and through the PWA, and also connects with Emigrant Canyon Trail (NFS Trail 255) in Bitter Creek.

At the north end of the Chiricahua Mountains from San Simon and Interstate 10 is Wood Canyon Road, a Cochise County-maintained road. Wood Canyon Road becomes Wood Canyon Road (NFS Road 700) at the proclaimed national forest boundary and provides motorized access into Wood Canyon and to Indian Creek Trail, which provides access to Emigrant Canyon Trail.

Mulkins Ranch Road, a Cochise County-maintained road, also provides motorized access into the National Forest and Emigrant Canyon at the northwest end of the Chiricahua Mountains. Mulkins Ranch Road becomes NFS Road 701 at the proclaimed national forest boundary and provides motorized access that requires a high–clearance, four-wheel-drive vehicle to Emigrant Canyon Road (NFS Road 255). Emigrant Canyon Road provides motorized access to Emigrant Canyon Trail (NFS Trail 255).

Although there appears to be adequate motorized and trail access to the PWA, other than Wood Canyon Road, permanent legal public access may be a future concern. There is little, if any, documented right-of-way for the existing road system across the non-Federal lands within and outside the proclaimed national forest boundary. Permanent legal public access to the NFS lands and the PWA in the northern end of the Chiricahua Mountains will continue to be an issue.

Boundaries: The majority of the boundary is recognizable through natural features, such as ridgelines and high points, in the Chiricahua Mountain Range. In areas where no prominent features can be

identified, the boundary follows the national forest boundary, as well as the Chiricahua National Monument boundary.

Geography and Topography: Situated at the northern end of the Chiricahua Mountains, the Ku Chish Potential Wilderness Area lies along the eastern flank of the range, extending from Emigrant Canyon in the northwest to Oak Creek in the southeast. Covering an area of 26,266 acres, it rises from a low point of 4,800 feet above sea level in Wood Canyon to a maximum elevation of 8,113 feet at Cochise Head. It is located approximately six miles southeast of Apache Pass, where Fort Bowie was established in 1862 to pave the way for the taming of the western frontier. A magnificent forest of rock spires is developed within silica-rich volcanics (i.e., rhyolite) that are exposed in the steep, narrow canyons of the Chiricahua National Monument, located immediately southwest of the southern portion of the Ku Chish PWA.

The north-south trending Chiricahua Range is typical of the Mexican Subprovince of the Southern Basin and Range Province in southeastern Arizona. At the northern end of the range, it is bounded by the San Simon Valley to the east and Sulphur Springs Valley to the west. The southwestern edge of this PWA is underlain by complexly deformed slivers of Precambrian granite and schist and sedimentary strata of Paleozoic and Cretaceous age caught up in the west-northwest trending Apache Pass fault zone. This narrow, structurally controlled erosional window is bounded on the northwest and southwest by Oligocene rhyolitic volcanics, which were produced by a series of massive eruptions at the Turkey Creek volcanic center located in the west-central portion of the Chiricahua Mountains.

Appearance and Vegetation: Due to steep topography, the vegetation is largely unmodified pinyon, juniper and evergreen oak woodland communities. Species include Madrean evergreen oaks such as Arizona white oak (*Quercus arizonica*), Emory oak (*Quercus emoryi*), gray oak (*Quercus grisea*), Mexican blue oak (*Quercus oblongifolia*) and Toumey oak (*Quercus toumeyi*). Other tree species [including border pinyon (*Pinus discolor*), Chihuahua pine (*Pinus leiophylla*) Arizona cypress (*Hesperocyparis arizonica*) and alligator (*Juniperus deppeana*) and redberry juniper (*J. coahuilensis*)] and interior chaparral species [including manzanita spp. (*Arctostaphylos* spp.), desert ceanothus (*Ceanothus greggii*), mountain mahogany (*Cercocarpus montanus*), silktassles (*Garrya wrightii*), Stansbury cliffrose (*Purshia stansburiana*), shrub live oak (*Quercus turbinella*) and sumacs (*Rhus* spp.)] may be present but do not codominate. Rosette scrubs such as Agaves (*Agave* spp.) yuccas (*Yucca* spp.) sotol (*Dasylirion wheeleri*) and beargrass (*Nolina microcarpa*).The ground cover is dominated by warm-season grasses such as threeawns (*Aristida* spp.), blue grama (*Bouteloua gracilis*), sideoats grama (*Bouteloua curtipendula*), Rothrock grama (*Bouteloua rothrockii*), Arizona cottontop (*Digitaria californica*), plains lovegrass (*Eragrostis* intermedia), curly-mesquite (*Hilaria belangeri*), green sprangletop (*Leptochloa dubia*), muhly grasses (*Muhlenbergia* spp.) and Texas bluestem (*Schizachyrium cirratum*). Overstory canopy is less than 20 percent in about 60 percent of the community. Riparian areas have a variety of upland and obligate riparian species, including Fremont cottonwood (*Populus fremontii*), velvet ash (*Fraxinus velutina*), Arizona sycamore (*Platanus wrightii*), Arizona walnut (*Juglans major*) and willows (*Salix* spp.). Historically, some areas near canyon bottoms and in the more gentle terrain were logged to provide wood for nearby mines, but second growth has largely matured. The Horseshoe2 fire burned most if not all of this area, much of it was classified as a high severity burn during the BAER assessment.

Current Uses: Visitors use this PWA for a variety of recreational activities. These lands lie adjacent to the Chiricahua Wilderness and Chiricahua National Monument. The two trails running through the area are used for hiking and horseback riding. One NFS road within the PWA is currently in use, although it has been recommended for decommissioning. There are no roads adjacent to the boundary and no developed recreation sites nearby. Topography is rugged, so there is very limited cross-country travel through the PWA. This PWA lies along the Coronado national forest boundary, and uses on adjacent

BLM, state, and private lands may result in recreation and other uses within the PWA. There are four grazing allotments within the Ku Chish Potential Wilderness Area. This PWA is within Fire Management 1 (FMU 1). Fire management units divide the landscape into smaller geographic areas to describe the differences in management strategies based on safety considerations, as well as physical, biological and social characteristics. FMU 1 indicates fire adapted vegetation communities. Current fire management includes a full range of responses, from aggressive initial attack to managing natural ignitions to achieve desired forest plan objectives when risk is within acceptable limits.

Capability

Naturalness

The remoteness of the Ku Chish PWA has allowed it to retain a semiprimitive setting. The area does not have any known nonnative species. The area serves as habitat for bats and Mexican spotted owls. This area of the Northern Chiricahua Mountains does not have perennial rivers or streams and there are no know water quality issues. However, there has been mining activity in the past that may impact water quality, but water samples have not been tested. Night skies can be clearly seen and light pollution is not evident.

Undeveloped

The Northern Chiricahua Potential Wilderness Area also has had a long history of human use and settlement, as evident in its historic and prehistoric sites and structures. The area has had mining activity and there are obvious signs of this activity within the area, including the old Taylor Place homestead.

Opportunities for Solitude or Primitive and Unconfined Recreation

A person could experience solitude, serenity, self-reliance and hiking and backpacking within this PWA. The area has challenging recreational opportunities. With no roads leading up to the PWA boundary and access only by foot, the ability to experience solitude is high.

Special Features

The most unique natural feature in the Ku Chish Potential Wilderness Area is Cochise Head. The area has several historic and prehistoric archeological sites that provide opportunities for research and education. The area is habitat for Mexican spotted owls and bats.

Manageability

The boundary of the Ku Chish Potential Wilderness Area was delineated to exclude adjacent private land and Forest Service roads that provide access to the area. The area is isolated, with limited motorized access. Given these conditions, this area has minimal challenges in managing it for wilderness characteristics. An adjustment to the boundary was made to exclude the southernmost portion of the initially proposed PWA boundary, which contains several homesteads with private mineral claims that could potentially diminish wilderness management capabilities in the area. In addition, the boundary was adjusted to follow natural features and prominent ridgelines, including high points. Roads within the area were granted a 300 foot buffer on either side to facilitate road maintenance and visitor parking. This adjustment enhances wilderness character and improves manageability by utilizing natural features to delineate the management boundaries.

The Ku Chish Potential Wilderness Area overall was rated as **high** for Capability (for individual scores, see appendix E).

Availability

In the Ku Chish Potential Wilderness Area, most of the current recreational uses and tourism could continue if the area was designated as wilderness. There are eight Threatened and Endangered species that may be located in the PWA that may require habitat restoration and/or monitoring, which could impact the availability of the PWA. Watersheds within the area are properly functioning. There are spring developments and water impoundments that require maintenance that could have a moderate effect on wilderness character. There are no ecosystem restoration activities currently planned for the area. However, the area is in need of vegetation treatments and there is the potential for such activities in the future. Planned and unplanned ignitions are introduced every 10 years, in accordance with Chiricahua FireScape. The area is committed through contracts and permits for livestock grazing and outfitter guides. These current authorizations do not conflict with wilderness management or detract from wilderness qualities. There is no potential for timber extraction. There is little or no potential for extraction of locatable minerals. There are no cultural resources that will be affected by wilderness management. The Ku Chish PWA is composed entirely of National Forest System lands, as is the adjacent land. The closest private land is a tenth of a mile from the PWA boundary and could impact the wilderness character of the area.

The Ku Chish Potential Wilderness Area overall was rated as **high** for Availability (for individual scores, see appendix F).

Need

Wilderness and Nonwilderness Lands in the Vicinity

The Coronado National Forest has eight wilderness areas comprising 339,553 acres or 19 percent of the Forest. Nationally, wilderness comprises 19 percent of National Forest System lands and within the Southwestern Region only 13 percent of these NFS lands are wilderness. The Coronado National Forest currently equals the national average of National Forest System land as wilderness and exceeds the regional average.

The Forest Service evaluated comparable public lands within a 100-mile radius of the potential wilderness area, which is assumed to be approximately a day's drive. Within 100 miles of the Ku Chish PWA, there are 14 designated wilderness areas totaling just over one million acres (see Table 5).

There are significant opportunities for unconfined outdoor recreation experiences outside of the designated wilderness areas within 100 miles of the Coronado National Forest, including over 4.1 million acres of Federal lands. Nonwilderness lands that provide a wilderness-like setting include primitive and semiprimitive nonmotorized areas, inventoried roadless areas, wilderness study areas, BLM National Conservation Areas, and USFWS National Wildlife Refuges. The combined acres of nonwilderness lands in the vicinity are double the amount of designated wilderness within 100 miles of the Coronado National Forest. Therefore, all potential wilderness areas received a low need rating for this factor.

Table 5. Designated wilderness within 100 Miles of the Ku Chish Potential Wilderness Area

Wilderness Area	Acres
Chiricahua National Monument Wilderness	10,290
Chiricahua Wilderness	87,700
Dos Cabezas Mountains Wilderness	11,700
Galiuro Wilderness	76,317
Gila Wilderness	558,014
Miller Peak Wilderness	20,191
Mount Wrightson Wilderness	25,260
North Santa Teresa Wilderness	5,800
Peloncillo Mountains Wilderness	19,440
Pusch Ridge Wilderness	56,933
Redfield Canyon Wilderness	6,600
Rincon Mountain Wilderness	38,950
Saguaro Wilderness	70,950
Santa Teresa Wilderness	26,780
TOTAL	1,014,925

Visitor Pressure

Increased demand for additional wilderness in both Arizona and New Mexico should be anticipated based on population growth during the period of 1990 to 2000, which exceeded the national growth rate. Assuming Arizona continues to grow at a rate greatly outpacing the national rate (predicted to be about 3 times the national rate), the number of visits to existing wilderness will continue to increase, and Arizona in particular could benefit from additional wilderness. Public demand increases with proximity to the Phoenix and Tucson population centers, which collectively represent 86 percent of the state's population. Substantial consideration should therefore be given to potential wilderness areas within 100 miles of those cities, in an effort to provide for the growing demand. Some additional public demand for wilderness in the Southwestern Region will occur from the influx of people moving to communities in the vicinity of the National Forests. In terms of geographic distribution of wilderness across all Federal lands, the Southwestern Region is underrepresented with 12 percent of Federal land in wilderness acres, as compared with 17 percent nationally. Desirability of the scenic mountainous settings available in the rural communities within and adjacent to national forests in the Southwestern Region will attract new residents and retirees, further contributing to a growth in wilderness visitation. All of the PWAs were rated high for this factor based on high current use on existing wilderness areas, surrounding population increases, and high demand for additional wilderness on the Coronado National Forest.

Primitive Sanctuary for Plants and Wildlife

As part of the forest plan revision process, the Coronado National Forest has developed a list of species that warrant consideration in the population viability evaluation. This species list includes 255 threatened, endangered, sensitive, and highly vulnerable species (G1-G2 or T1-T2) that are known to occur on the Coronado National Forest. Appendix I shows the total number of these species that are known to occur in each potential wilderness area, provided the Forest Service has adequate information on habitat distribution. Although none of these species require a primitive environment to survive, all listed species would benefit from reduced disturbance. The combined number of threatened, endangered, sensitive, and highly vulnerable species on this PWA rates in the high range (more than 60 species) for this factor.

Capacity of Established Wilderness Areas

There are eight existing wilderness areas and three wilderness study areas (WSA) on the Coronado National Forest. The wilderness areas and WSA range in size from 7,400 acres to 87,700 acres. Accessibility by motor vehicles ranges from easily accessible to remote, hard-to-access wilderness. Trail systems range within wilderness areas from extensive trail systems to very minimal systems. Visitor use is considered high in the wilderness areas adjacent to the Tucson metropolitan area, and includes the Pusch Ridge and Mount Wrightson Wildernesses. Encounters with other wilderness visitors in both areas are high. For these two areas there are limited management opportunities to accommodate additional use. The Coronado National Forest also has wilderness areas that are remote, difficult to access, and where visitor use is considered low. Here, additional demand could be accommodated without management changes.

Wilderness Areas with Similar Landform and Vegetation

Consideration was given to how the landform and ecological condition of the Ku Chish Potential Wilderness Area might be broadly similar to existing wilderness areas within the National Wilderness Preservation System. All designated wilderness areas in Arizona and New Mexico were compared using ecological sections and vegetation communities.

The Ku Chish Potential Wilderness Area is in the Basin and Range Section of the Chihuahuan Semi-Desert Province (Section 321A, McNab and Avers 1994). The Basin and Range Section encompasses 24,270 square miles, of which 749 square miles (approximately 3 percent) occur in 20 designated wilderness areas.

The Ku Chish Potential Wilderness Area includes 5 of the 16 underrepresented vegetation communities in the Southwestern Region of the Forest Service (see Table 6). Of these five vegetation communities, the Ku Chish PWA would only contribute an additional 0.1 percent to wilderness in the following vegetation types: Interior Chaparral, Madrean Encinal Woodland and Madrean Pine Oak Woodland. The vegetation communities in this PWA consist of 88.50 percent regionally underrepresented vegetation types, therefore the PWA rates in the medium range (50-90 percent) for this factor.

Table 6. Southwestern Region underrepresented vegetation communities found in the Ku Chish Potential Wilderness Area (PWA)

Underrepresented Vegetation Communities	Acres within Ku Chish PWA	Percent of Ku Chish PWA	Percent Addition of Ku Chish PWA to Wilderness
Interior Chaparral	1,502	10.9	0.1
Madrean Encinal Woodland	8,661	62.6	0.1
Madrean Pine Oak Woodland	1,823	13.2	0.1
Mixed Conifer Forest	198	1.4	0.0
Riparian Areas	58	0.4	0.0
Grand Total	**12,242**	**88.5%**	**0.3%**

The Ku Chish Potential Wilderness Area overall was rated as **medium** for Need (for individual scores, see appendix G).

Public Input

Public involvement and input is an essential component of the potential wilderness evaluation process. Beginning in March 2010, six open-house events were held in geographic locations across the Forest's service area to present the draft revised forest plan and plan-related documents to the public. The initial

evaluation of the Ku Chish Potential Wilderness Area was shared to elucidate public input on the need for new wilderness areas. Approximately 200 individuals attended, representing 54 groups and organizations. Each open house was structured to provide flexibility to attendees, in that they did not need to commit a specific or large block of time to participate. However, many people stayed for two hours or more, engaging in discussions with the resource specialists and other participants.

Initial public feedback on the Ku Chish PWA encouraged consideration of the area for wilderness designation. Feedback in support of wilderness recommendation requested a reevaluation of the naturalness and availability of the area, as well as changing the name from North Chiricahua PWA to Cochise Head PWA. Additional public input regarding the Ku Chish PWA suggested a boundary adjustment to extend further downslope and within 100 feet of existing roads to include more wilderness-quality areas. Contrasting public opinion on the Ku Chish PWA requested further consideration of the requirements and needs of mountain bike enthusiasts. This particular user group argued against the designation of the Ku Chish polygon as wilderness because they believed it would restrict the availability of exceptional mountain biking in the area. The updated version of the Ku Chish Potential Wilderness Evaluation Report will be shared with the public for feedback in the summer of 2013, in conjunction with the 90-day public comment period for the revised forest plan. Additional public feedback will be considered and incorporated into the reports, as appropriate.